

In the claims:

Amend the claims as follows:

1. (Currently Amended) A ~~B-cell epitope~~ peptide, the sequence of which ~~comprises~~ ~~consists of part or all of~~ SEQ ID NO:1, ~~wherein the sequence comprises or a portion thereof that is selected from the group consisting of~~ SEQ ID NO:2 ~~and~~ ~~or~~ SEQ ID NO:3.
2. (Currently Amended) The ~~B-cell epitope~~ peptide of claim 1, the sequence of which consists of SEQ ID NO:2.
3. (Currently Amended) The ~~B-cell epitope~~ peptide of claim 1, the sequence of which consists of SEQ ID NO:3.
4. (Withdrawn)
5. (Currently Amended) A ~~B-cell epitope~~ peptide as claimed in claim 1, being a synthetic peptide.
6. (Original) A chemically modified peptide according to claim 5.
7. (Currently Amended) A ~~B-cell epitope~~ peptide as claimed in claim 1, capable of conferring immunity against autoimmune and/or inflammatory disorders.
- 8-12. (Withdrawn)
13. (Currently Amended) A vaccine comprising as an active ingredient an effective vaccinating amount of at least one ~~B-cell epitope~~ peptide as claimed in claim 1, optionally further comprising a pharmaceutically acceptable carrier, diluent, additive or adjuvant.
14. (Withdrawn)

15. (Original) A vaccine as claimed in claim 13, for conferring immunity against autoimmune or inflammatory disorders.

16. (Currently amended) The vaccine as claimed in claim 15, for conferring immunity against arthritis.

17-23. (Withdrawn)

24. (Cancelled)

25. (Currently Amended) The ~~B-cell epitope~~ peptide of claim 1, the sequence of which consists of SEQ ID NO:1.

26. (Currently Amended) The ~~B-cell epitope~~ peptide of claim 1, the sequence of which comprises SEQ ID NO:2.

27. (Currently Amended) The ~~B-cell epitope~~ peptide of claim 1, the sequence of which comprises SEQ ID NO:3.

28. (New) A peptide, the sequence of which consists of part or all of SEQ ID NO:2 or 3, wherein the sequence comprises amino acid residues 7-16 of SEQ ID NO:1.

29. (New) The peptide of claim 28, being a synthetic peptide.

30. (New) The peptide of claim 29, wherein the peptide is chemically modified.

31. (New) The peptide of claim 28, capable of conferring immunity against autoimmune and/or inflammatory disorders.

32. (New) The peptide of claim 28, the sequence of which consists of amino acid residues 7-16 of SEQ ID NO:1.

33. (New) The peptide of claim 32, being a synthetic peptide.

34. (New) The peptide of claim 33, wherein the peptide is chemically modified.

35. (New) The peptide of claim 32, capable of conferring immunity against autoimmune and/or inflammatory disorders.

36. (New) A method for treating an autoimmune or inflammatory disorder, the method comprising:

identifying a subject suffering from an autoimmune or inflammatory disorder; and administering to the subject an effective amount of the peptide of claim 1.

37. (New) The method of claim 36, wherein the subject is a human.

38. (New) The method of claim 36, wherein the subject is suffering from rheumatoid arthritis or adjuvant arthritis.

39. (New) The method of claim 36, wherein the peptide comprises the amino acid sequence of SED ID NO:2.

40. (New) The method of claim 36, wherein the peptide comprises the amino acid sequence of SED ID NO:3.

41. (New) The method of claim 36, wherein the peptide is a synthetic peptide.

42. (New) The method of claim 41, wherein the peptide is chemically modified.

43. (New) A method for treating an autoimmune or inflammatory disorder, the method comprising:

identifying a subject suffering from an autoimmune or inflammatory disorder; and
administering to the subject an effective amount of the peptide of claim 28.

44. (New) The method of claim 43, wherein the subject is a human.

45. (New) The method of claim 43, wherein the subject is suffering from rheumatoid arthritis or adjuvant arthritis.

46. (New) The method of claim 43, wherein the sequence of the peptide consists of amino acid residues 7-16 of SEQ ID NO:1.

47. (New) The method of claim 43, wherein the peptide is a synthetic peptide.

48. (New) The method of claim 47, wherein the peptide is chemically modified.

49. (New) A method for generating antibodies, comprising:
providing the peptide of claim 1; and
administering the peptide to a subject.

50. (New) The method of claim 49, wherein the subject is an animal.

51. (New) The method of claim 50, wherein the subject is a rat, mouse, sheep, rabbit, or chicken.

52. (New) The method of claim 50, wherein the method further comprising isolating from the subject antibodies that recognize the peptide.

53. (New) The method of claim 50, wherein the peptide comprises the amino acid sequence of SED ID NO:2.

54. (New) The method of claim 50, wherein the peptide comprises the amino acid sequence of SED ID NO:3.

55. (New) The method of claim 50, wherein the peptide is a synthetic peptide.

56. (New) The method of claim 55, wherein the peptide is chemically modified.

57. (New) The method of claim 49, wherein the subject is a human.

58. (New) The method of claim 57, wherein the peptide comprises the amino acid sequence of SED ID NO:2.

59. (New) The method of claim 57, wherein the peptide comprises the amino acid sequence of SED ID NO:3.

60. (New) The method of claim 57, wherein the peptide is a synthetic peptide.

61. (New) The method of claim 60, wherein the peptide is chemically modified.

62. (New) A method for generating antibodies, comprising:
providing the peptide of claim 28; and
administering the peptide to a subject.

63. (New) The method of claim 62, wherein the subject is an animal.

64. (New) The method of claim 63, wherein the subject is a rat, mouse, sheep, rabbit, or chicken.

65. (New) The method of claim 63, wherein the method further comprising isolating from the subject antibodies that recognize the peptide.

66. (New) The method of claim 63, wherein the sequence of the peptide consists of amino acid residues 7-16 of SEQ ID NO:1.

67. (New) The method of claim 63, wherein the peptide is a synthetic peptide.

68. (New) The method of claim 67, wherein the peptide is chemically modified.

69. (New) The method of claim 62, wherein the subject is a human.

70. (New) The method of claim 69, wherein the sequence of the peptide consists of amino acid residues 7-16 of SEQ ID NO:1.

71. (New) The method of claim 69, wherein the peptide is a synthetic peptide.

72. (New) The method of claim 71, wherein the peptide is chemically modified.

73. A method for predicting the susceptibility or predisposition of a subject to arthritis, the method comprising:

providing the peptide of claim 1;

obtaining a serum sample from a subject; and

testing the sample to detect antibodies that recognize the peptide;

wherein absence of the antibodies indicates that the subject is susceptible or predisposed to arthritis.

74. (New) The method of claim 73, wherein the subject is a human.

75. (New) The method of claim 73, wherein the peptide comprises the amino acid sequence of SED ID NO:2.

76. (New) The method of claim 73, wherein the peptide comprises the amino acid sequence of SED ID NO:3.

77. (New) The method of claim 73, wherein the peptide is a synthetic peptide.

78. (New) The method of claim 77, wherein the peptide is chemically modified.

79. (New) A method for predicting the susceptibility or predisposition of a subject to arthritis, the method comprising:

providing the peptide of claim 28;

obtaining a serum sample from a subject; and

testing the sample to detect antibodies that recognize the peptide;

wherein absence of the antibodies indicates that the subject is susceptible or predisposed to arthritis.

80. (New) The method of claim 79, wherein the subject is a human.

81. (New) The method of claim 79, wherein the sequence of the peptide consists of amino acid residues 7-16 of SEQ ID NO:1.

82. (New) The method of claim 79, wherein the peptide is a synthetic peptide.

83. (New) The method of claim 82, wherein the peptide is chemically modified.